Securitate informațională. Experți și utilizatori

Proiectul învățământului superior din Moldova – DATASEA

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erts and users:

oring, whistleblowing, curati

Privacy paradox

- Trading data for convenience
- “While users claim to be very concerned about their privacy, they nevertheless undertake very little to protect their personal data. ” (Barth & de Jong 2017)
- Cultural normalization of surveillance

Outline

1. Social contracts
   - Society and public goods
   - Professions
   - Corporations
2. The expert role
   - Exit, voice, loyalty
   - Ethical corporate activity vs. whistleblowing
3. The user & citizen role
   - Limiting data flows: filtering, obfuscation
   - Digital profile curation
   - Monetizing one's own data
   - Curating for self and others
   - Collective action

Social contracts

Society and public goods

Professional groups

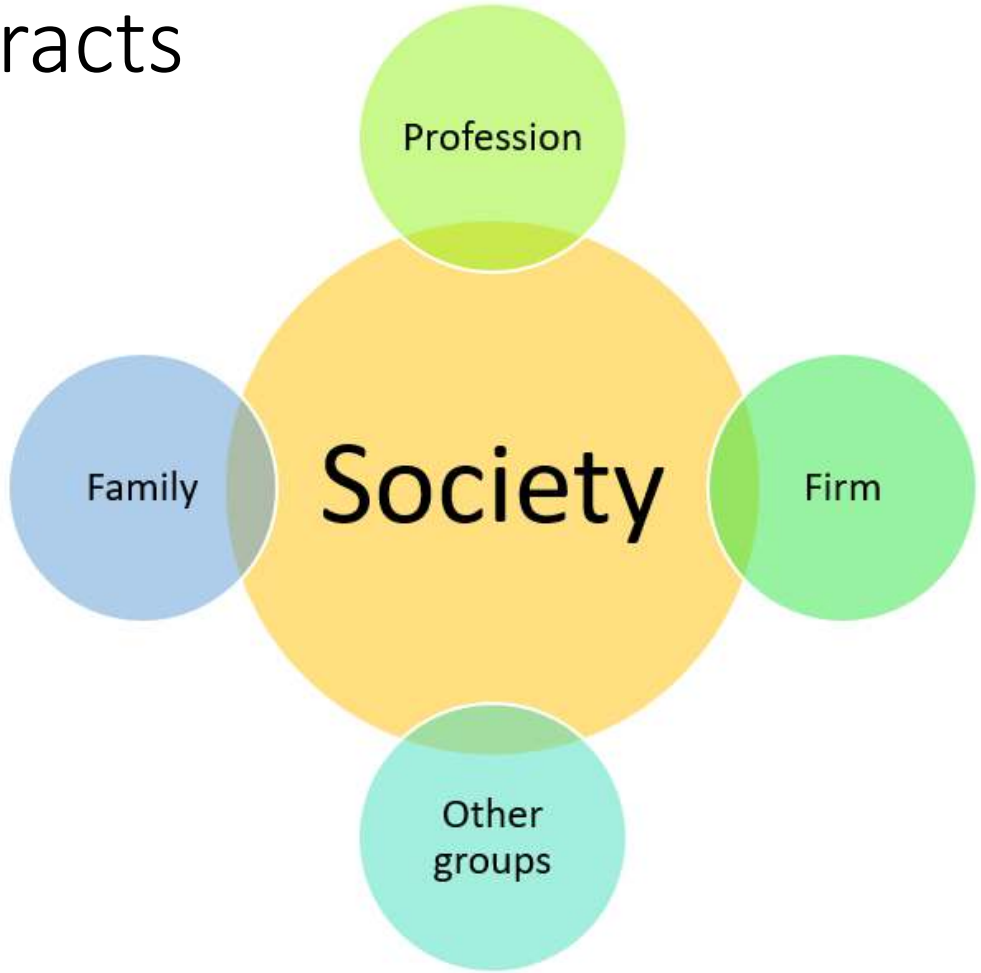
Corporations

Society: a structure of public goods

- Public sustenance
  - Breathable air
  - Drinkable water
  - Eatable food
- Public infrastructures
  - Roads, railroads, bridges
  - Information infrastructures (Internet)
  - Public housing
- Togetherness
  - Peace
  - Justice & social order
  - Journalism & public debates
  - Social support for disadvantaged people

A variety of social contracts

- Profession
  - Professional ethics
  - Professional practices
  - The interests of the profession
- Family & “tribes”
  - Wellbeing
  - Values
- Other groups: associations, NGOs

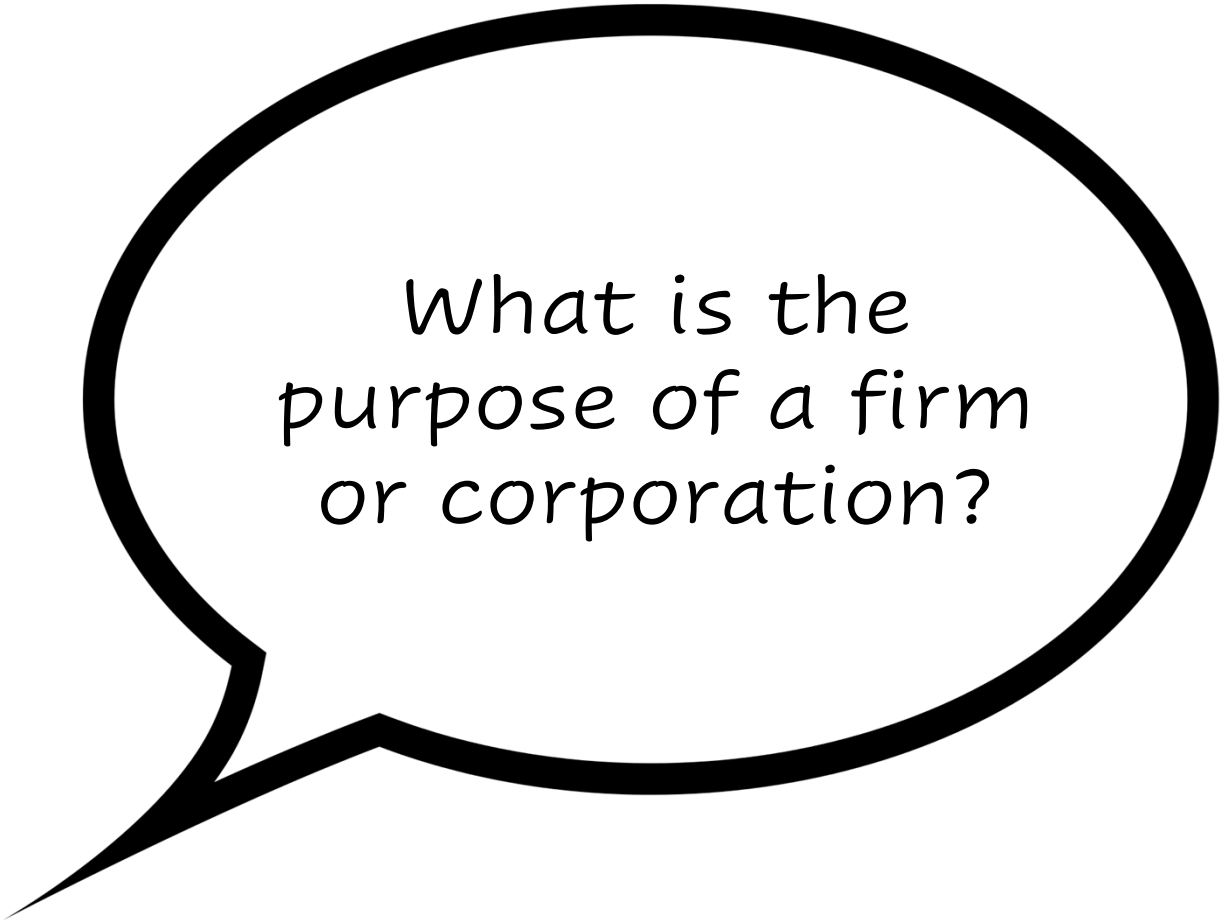


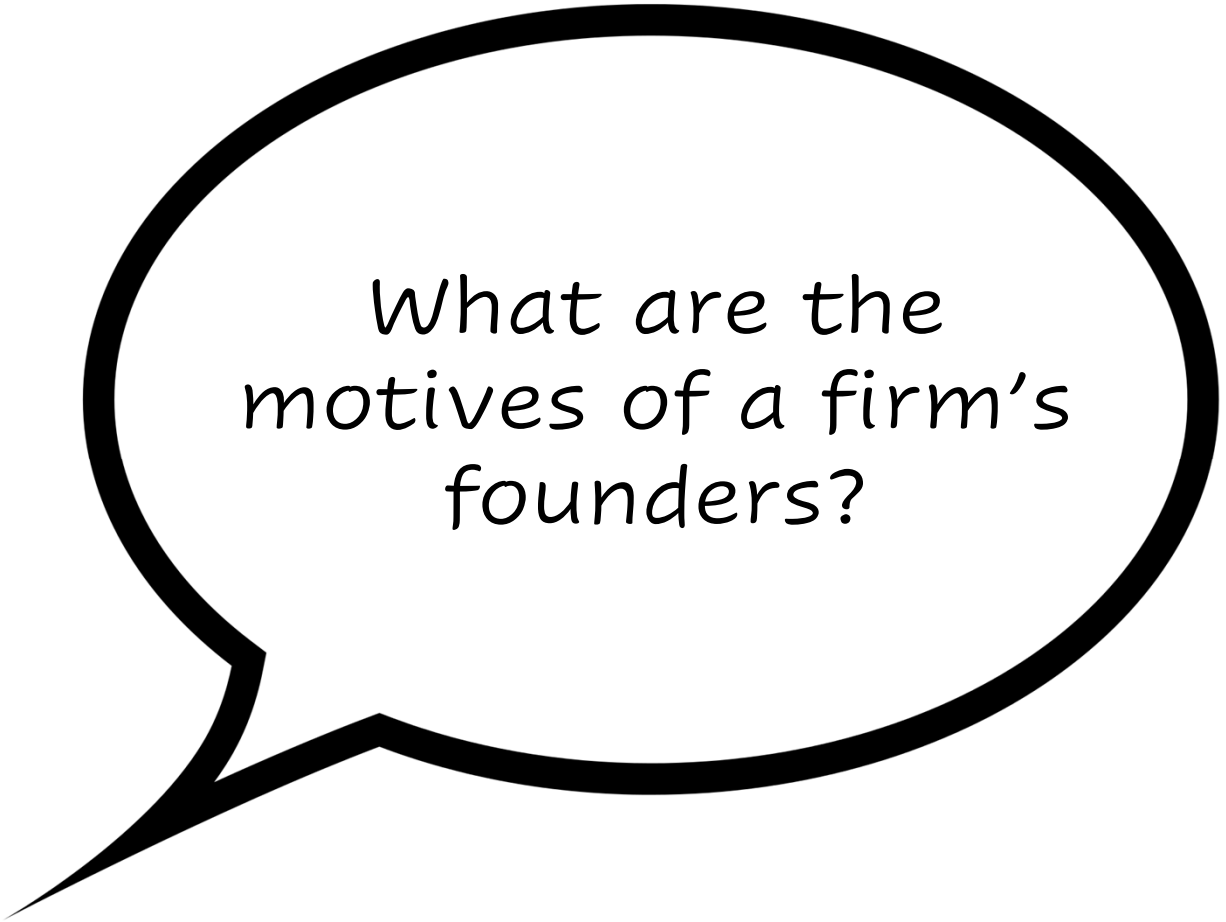
Contracts with the engineering profession

- Enact professional **ethics** – eg NSPE (National Society of Professional Engineers):
  - Hold paramount the safety, health, and welfare of the public.
  - Perform services only in areas of their competence.
  - Issue public statements only in an objective and truthful manner.
  - Act for each employer or client as faithful agents or trustees.
  - Avoid deceptive acts.
  - Conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.
- Consolidate professional **knowledge** & **practices**
- Advance the **interests** of the profession in society
  - Consolidate reputation & prestige
  - Make voices heard in politics, public debate
  - Increase rewards

Contracts with the corporation

- Who defines the goals of the corporation?
  - Stakeholders vs. shareholders
- Corporate Social Responsibility (CSR)
  - Is CSR ethical?
  - Is CSR real, or just a decoy?
  - Is CSR necessary?


What is the purpose of a firm or corporation?


What are the motives of a firm's founders?

Friedman doctrine: Shareholder theory

- Milton Friedman (Wiki): “The Social Responsibility of Business Is to Increase Its Profits.” (NY Times, 1970)
- A firm exclusive responsibility is to its shareholders
- A company has no social responsibility to the public or society
- Corporate charity is wasting shareholders’ money

Freeman doctrine: Stakeholder theory

- R. Edward Freeman (Wiki) (1983)
- A firm responsibility is to its multiple stakeholders
  - Shareholders
  - Customers
  - Employees and trade unions
  - Suppliers and financiers
  - Society and communities
  - Future generations
- Ex.: Who are the stakeholders in higher education?

Corporate social responsibility (CSR) & business ethics

- Strategic corporate action that contributes to the social good
  - Contributes to branding
  - Long term profitability vs. waste of shareholders' money?
- What relation between CSR and current business practice?
  - Ex.: Big Tobacco, Big Plastic, Big Tech
- Corporate ethics policies & offices
  - Social and natural sustainability

Overspilling “for profit” paradigm

- We use the “for profit” & shareholder model for many types of groups
- What about the goals of…
  - Media organizations
  - Schools and Universities
  - Hospitals
  - NGOs
  - Army, Police
  - Churches

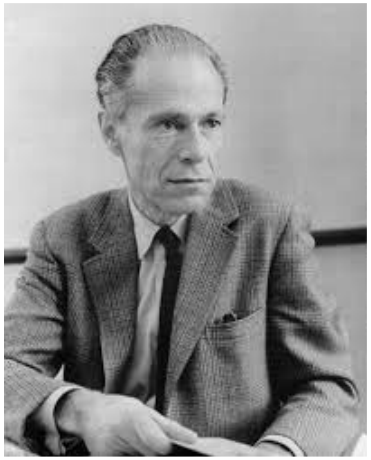
Expert for hire

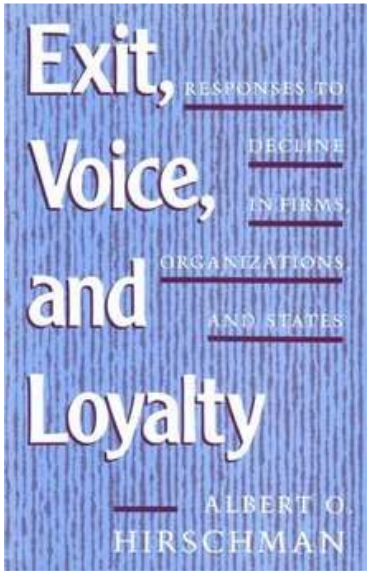
Monitoring and acting in the organization and in public

Whistleblowing

Experts' available reactions

- Albert O. Hirschman (1970) "Exit, Voice, and Loyalty" (Wiki)
- Exit
  - Leaving the company (e.g. T. Harris)
  - Whistleblowing (e.g. C. Wylie)
- Voice
  - Taking actions within one's organization (e.g. T. Harris)
  - Contributing to public debates (e.g. T. Gebru)
    - Scientific research
    - Mass media & social media
- Loyalty / Indifference





Geoffrey Hinton & Dangers of AI

- Hinton quit Google in May 2023
- After the San Francisco start-up OpenAI released a new version of ChatGPT in March, more than 1,000 technology leaders and researchers signed an open letter calling for a six-month moratorium on AI

By Jennifer Korn
Updated 6:17 AM EDT, Wed May 3, 2023

Source: CNN, 2023

Meta, 2023

- Arturo Béjar, a longtime employee, **came forward** to the Wall Street Journal (Oct. 2023) to accuse Meta of knowing, through its own research, that its platforms were hurting children
- He was engineering director on its Protect and Care Team (2009 to 2015) & consultant on Instagram's Well-Being Team (2019 to 2021)

Source, 2023

Frances Haugen – The Facebook Files, WSJ

Frances Haugen (born 1983/84[1]) is an American data engineer and scientist, product manager, and whistleblower. She disclosed tens of thousands of Facebook's internal documents to the Securities and Exchange Commission and *The Wall Street Journal* in 2021.

Frances Haugen

Haugen in 2021

Born	Iowa City, Iowa, U.S.
Education	Olin College (BS) Harvard University (MBA)
Occupation	Data engineer, product manager
Website	franceshaugen.com

wsj.com/articles/the-facebook-files-11631713039

THE WALL STREET JOURNAL.

Facebook Inc. knows, in acute detail, that its platforms are riddled with flaws that cause harm, often in ways only the company fully understands. That is the central finding of a Wall Street Journal series, based on a review of internal Facebook documents, including research reports, online employee discussions and drafts of presentations to senior management.

Sursa

THE WALL STREET JOURNAL.

Reveal a Secret Elite That's Exempt

By Jeff Horwitz

Mark Zuckerberg has said Facebook allows its users to speak on equal footing with the elites of politics, culture and journalism, and that its standards apply to everyone. In private, the company has built a system that has exempted high-profile users from some or all of its rules. The program, known as "cross check" or "XCheck," was intended as a quality-control measure for high-profile accounts. Today, it shields millions of VIPs from the company's normal enforcement, the documents show. Many abuse the privilege, posting material including harassment and incitement to violence that would typically lead to sanctions. Facebook says criticism of the program is fair, that it was designed for a good purpose and that the company is working to fix it. (Listen to a related podcast.)

THE WALL STREET JOURNAL.

_02 Facebook Knows Instagram Is Toxic for Many Teen Girls, Company Documents Show

By Georgia Wells, Jeff Horwitz and Deepa Seetharaman

Researchers inside Instagram, which is owned by Facebook, have been studying for years how its photo-sharing app affects millions of young users. Repeatedly, the company found that Instagram is harmful for a sizable percentage of them, most notably teenage girls, more so than other social-media platforms. In public, Facebook has consistently played down the app's negative effects, including in comments to Congress, and hasn't made its research public or available to academics or lawmakers who have asked for it. In response, Facebook says the negative effects aren't widespread, that the mental-health research is valuable and that some of the harmful aspects aren't easy to address. (Listen to a related podcast.)

THE WALL STREET JOURNAL.

_03 Facebook Tried to Make Its Platform a Healthier Place. It Got Angrier Instead.

By Keach Hagey and Jeff Horwitz

Facebook made a heralded change to its algorithm in 2018 designed to improve its platform—and arrest signs of declining user engagement. Mr. Zuckerberg declared his aim was to strengthen bonds between users and improve their well-being by fostering interactions between friends and family. Within the company, the documents show, staffers warned the change was having the opposite effect. It was making Facebook, and those who used it, angrier. Mr. Zuckerberg resisted some fixes proposed by his team, the documents show, because he worried they would lead people to interact with Facebook less. Facebook, in response, says any algorithm can promote objectionable or harmful content and that the company is doing its best to mitigate the problem. (Listen to a related podcast.)

Theranos whistleblowers

- Erika Cheung and Tyler Shultz became whistleblowers because their concerns were not taken seriously by the company.
- Elizabeth A. Holmes was sentenced on in 2022 to 135 months (11 years, 3 months) in federal prison
- Ramesh “Sunny” Balwani was sentenced in 2022 to 155 months (12 years, 11 months) in federal prison
  - For fraud that risked patient health by misrepresenting the accuracy of Theranos blood analysis technology and that defrauded Theranos investors of millions of dollars.

Theranos whistleblowers Erika Cheung and Tyler Shultz. *(Daniel Boczarski/Getty Images for New York Magazine)*

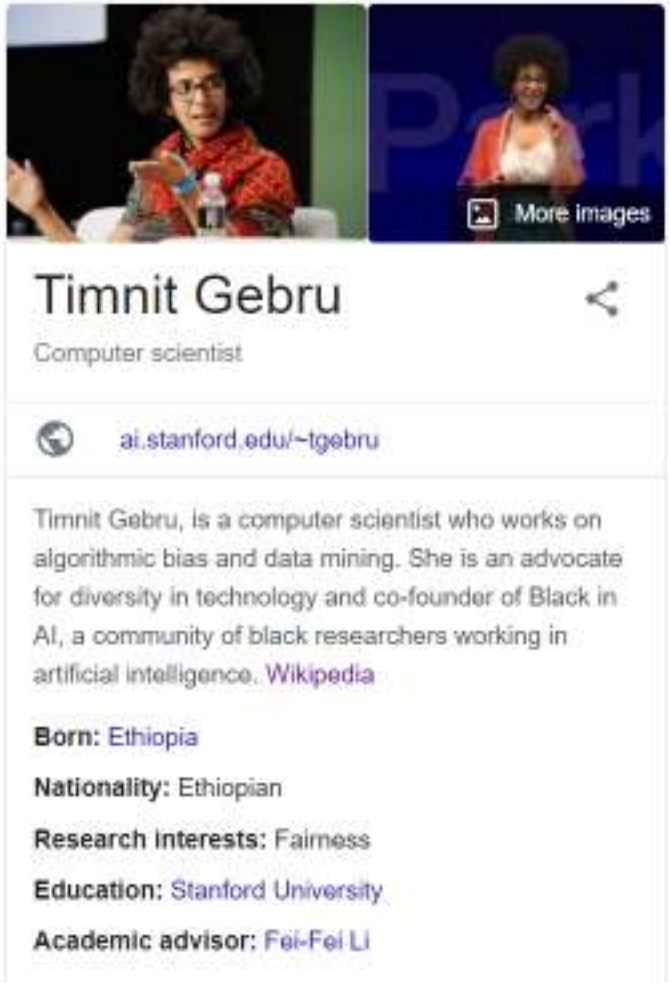
Source

Image source

Ethics @ Google, 2020

- Timnit Gebru et al., “On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?”
- 4 risks of Large Language Models
  - Carbon footprint & financial costs
  - Black box models & bias
  - High entrance costs for smaller & smarter, more focused models
  - Illusion of meaning & hallucinations

(Hao 2020, MIT Technology Review)



Ethics @ Google, 2013

- Tristan Harris' presentation "A Call to Minimize Distraction & Respect Users' Attention" (Feb. 2013)
- Became design ethicist until 2016 (Newton 2018)
- Left to co-found Center for Humane Technology
- Starring in Netflix' The Social Dilemma

Whistleblowing

Christopher Wylie & Cambridge Analytica

"At 28, Christopher Wylie agreed to talk, he told The Guardian, out of a sense of guilt.
Four years earlier, Wylie says he came up with the idea to pull big data and social media to fuel a form of information warfare: an idea that led to the creation of Cambridge Analytica.
Coming forward involved breaking a nondisclosure agreement, yet Wylie did it, he explained, because he felt morally conflicted." (Hempel in WIRED, March 19, 2018)

Source

Is whistleblowing a new individualistic salvation practice?

OS KEYES IDEAS 10.18.2021 08:00 AM

The Facebook Whistleblower Won't Change Anything

Whistleblowing has turned into a secular form of confession that keeps the limelight on one person instead of the movements already doing the work.

TRUTH BE TOLD, predicting the future isn't my strong suit (and I have a trophy to prove it)—but here's one prediction I make with full confidence: The latest Facebook revelations, courtesy of whistleblower Frances Haugen, will have *zero* impact on regulation. No new laws, no new regulations, no new challenges worth a damn. And the issue isn't Haugen's testimony or proposals (not that there aren't issues with both), nor the inanity of some of the questions she got in return (ditto). Rather, the issue is with the expectations we place on whistleblowing. The idea we have of what whistleblowing can achieve.

Source

Users & citizens

Filtering, curation, exit

Monetizing data

Shared & collective action

User responses

- **Deriving value**
  - Using and/or monetizing one's own data to create value
  - **Profitable** digital footprints
- **Exit** means…
  - Using & developing **tools** for privacy
    - No use of digital products
    - No sharing of digital data
    - **Obfuscation**
  - **Minimal** / **poor** digital footprint
- **Filtering** means…
  - Using & developing **tools** for privacy
    - Critical use of digital products
  - **Thinner** digital footprints

- **Curation**
  - Shaping personal profiles to fit a desired image
  - **Curated** digital footprints
  - Curating our own footprints - but also our **significant others'** footprints

Deriving
monetary value

Deriving value from our personal data?

- Little progress by now
- Data trusts (Artyushina)
- https://www.trusts-data.eu/
- Solid Project (Tim Berners Lee)
- Trusts mediate individuals' data exchange with companies and states
  - Redistribution of data dividends

trusts-data.eu

The project

The Horizon 2020 project TRUSTS – Trusted Secure Data Sharing Space aims to develop a da sharing platform for secure, trustworthy, and GDPR-compliant data exchanges.

Based on the experience of two large national data market projects, TRUSTS will allow the integration and adoption of future platforms in different jurisdictions.

solidproject.org

All of your data, under your control

Solid lets people store their data securely in decentralized data stores called **Pods**. Pods are like secure personal web servers for data. All data in a pod is accessible via the Solid Protocol. When data is stored in someone's pod, they control who and what can access it.

Solid is led by the inventor of the Web, Sir Tim Berners-Lee, to help realise his vision for its future.

Store anything

Any kind of data can be stored in a Solid pod, including regular files that you might store in a Google Drive or Dropbox folder, but it is the ability to store **Linked Data** that makes Solid special.

Exit

Exit 2023

- “Delete Facebook”!
- Low digital footprint

In the year since I quit social media, my screen time has fallen, my mood is up – even my resting heart rate is lower

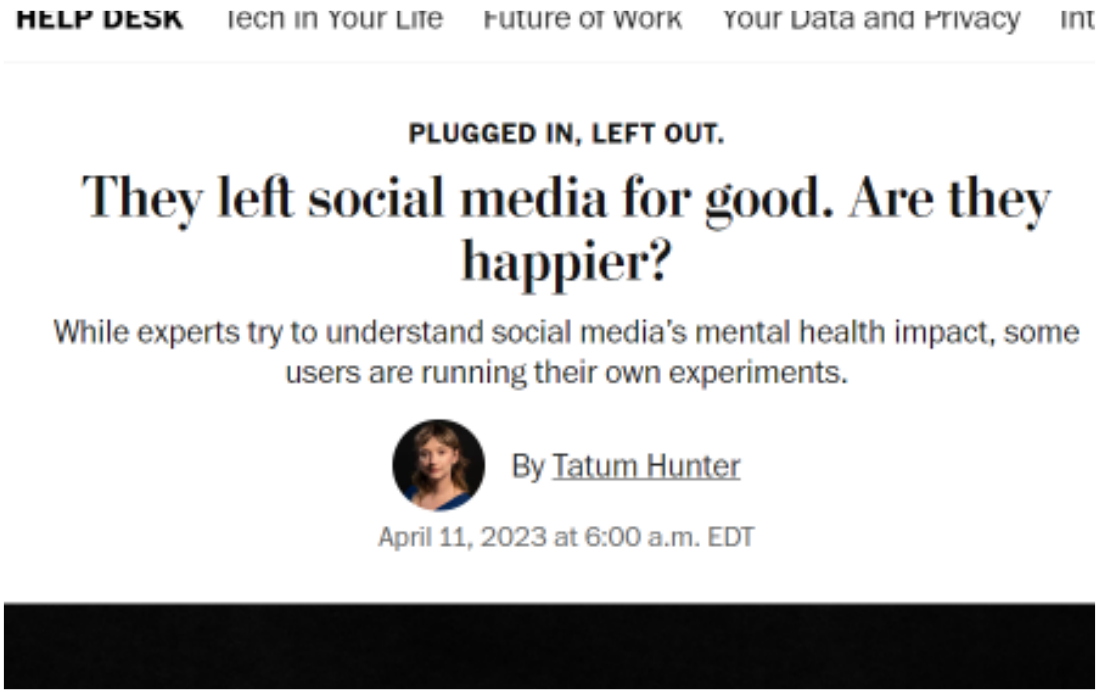
Philippa Moore

A snap decision to step away has become a lifestyle shift for **Philippa Moore.** Though keeping up with friends can be tricky, she has no regrets

Wed 17 May 2023 17.00 CEST

119

[Source](), 2023



HELP DESK Tech in Your Life Future of Work Your Data and Privacy Int

PLUGGED IN, LEFT OUT.

They left social media for good. Are they happier?

While experts try to understand social media's mental health impact, some users are running their own experiments.

By Tatum Hunter

April 11, 2023 at 6:00 a.m. EDT

[Source](), 2023

Obfuscation

- Confusing trackers
- Track Me Not: random search queries
- AdNauseam: random ad clicks
- “Obfuscation is no substitute for an organized and energetic movement, backed by the force of law, to counteract the surveillance advertising that governs so much of the internet.” (McGuigan 2021, MIT Technology Review)

Filtering & curation

Strategies
Tools

Strategies: Obfuscation & Minimization

Data obfuscation

- Disguising personal data
- **VPN (Virtual Private Network)**: Hides your IP address and encrypts your internet connection.
- **Tor Browser**: Helps anonymize your web browsing.
- **Fake Information Generators**: For instances where you need to fill out non-essential forms online.

Data minimization

- Sharing the least amount
- **Privacy-focused Browsers**: Like Brave or Firefox Focus, which limit data tracking.
- **Cookie Management Extensions**: To control or block cookies that track your browsing.

Strategies: Encryption & Privacy settings

Encryption

- Making data unreadable
- **End-to-End Encrypted Messaging Apps**: Like Signal or WhatsApp.
- **File Encryption Software**: Such as VeraCrypt for encrypting files on your device.

Privacy settings management

- Limiting data sharing
- **Built-in Privacy Controls**: On platforms like Facebook, Google, etc.
- **Privacy Guides and Checklists**: Like those provided by the Electronic Frontier Foundation (EFF).

Strategies: Passwords & Updates

Secure password management

- Strong passwords
- 2-factor authentication
- **Password Managers**: Like LastPass or 1Password, which store and generate strong passwords.
- **Authenticator Apps**: Like Google Authenticator or Authy.
- **Physical Security Keys**: Such as YubiKey.

Regular software updates

- Protect against vulnerabilities
- **Built-in Update Features**: In operating systems and applications.
- **Security Software**: That notifies about outdated software.

Privacy startups

- **Optery** – to pierce data brokers' anti-bot systems and find out who has your information
- **Anjuna** – for confidential computing, to protect data even when in use
  - Protects against harvesting for AI training
- **Pindrop** – to detect synthetical speech, recorded-voice replay attacks, morphed voices, & audiovisual deepfakes

Source, 2023

Filtering & curation tools

1. **Trustless transactions**
   - Encrypted messengers
   - TOR browsing
   - VPN
2. **Privacy monitors**
   - Ad blockers
   - Tracker blockers
   - Feed monitors
   - App leak monitors
3. **Configuring settings**

1. Trustless transaction solutions

End-to-end encrypted messaging apps

TOR browser

VPNs

Encrypted messaging apps

Signal

WhatsApp

Telegram

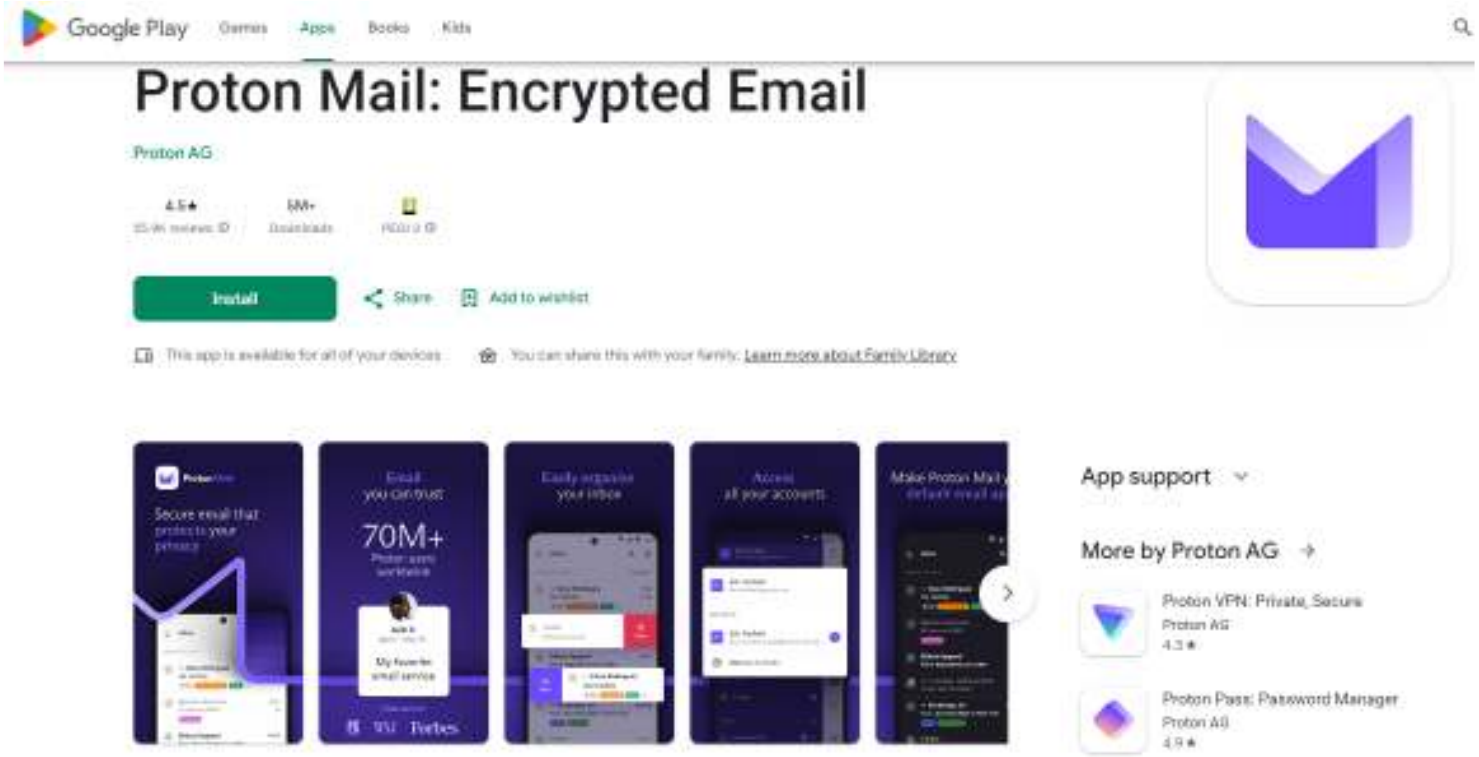
Threema

Wickr Me

Viber

Silence

Encrypted email



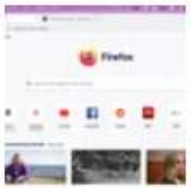
Privacy search engines

Source, 2023

Privacy oriented browsers

Brave

Best browser for privacy overall

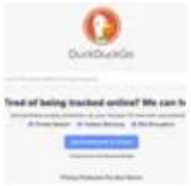


Mozilla Firefox

Most secure browser for tracking protection

The Tor browser

Best for anonymous browsing



DuckDuckGo

Best mobile browser for privacy and searches

Mullvad Browser

Best for use with a VPN

Source, 2023

TOR browser

BLOCK TRACKERS

Tor Browser isolates each website you visit so third-party trackers and ads can't follow you. Any cookies automatically clear when you're done browsing. So will your browsing history.

DEFEND AGAINST SURVEILLANCE

Tor Browser prevents someone watching your connection from knowing what websites you visit. All anyone monitoring your browsing habits can see is that you're using Tor.

RESIST FINGERPRINTING

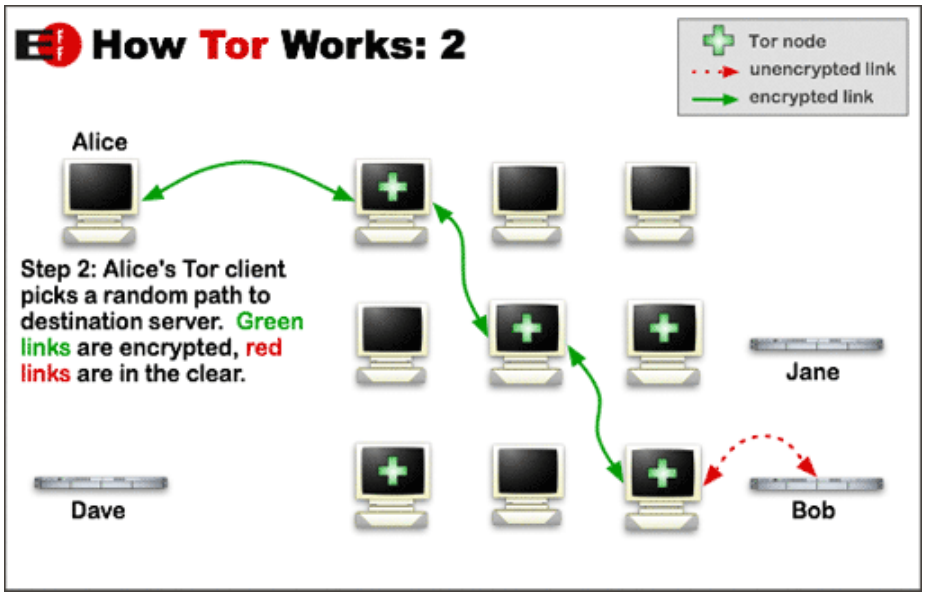
Tor Browser aims to make all users look the same, making it difficult for you to be fingerprinted based on your browser and device information.

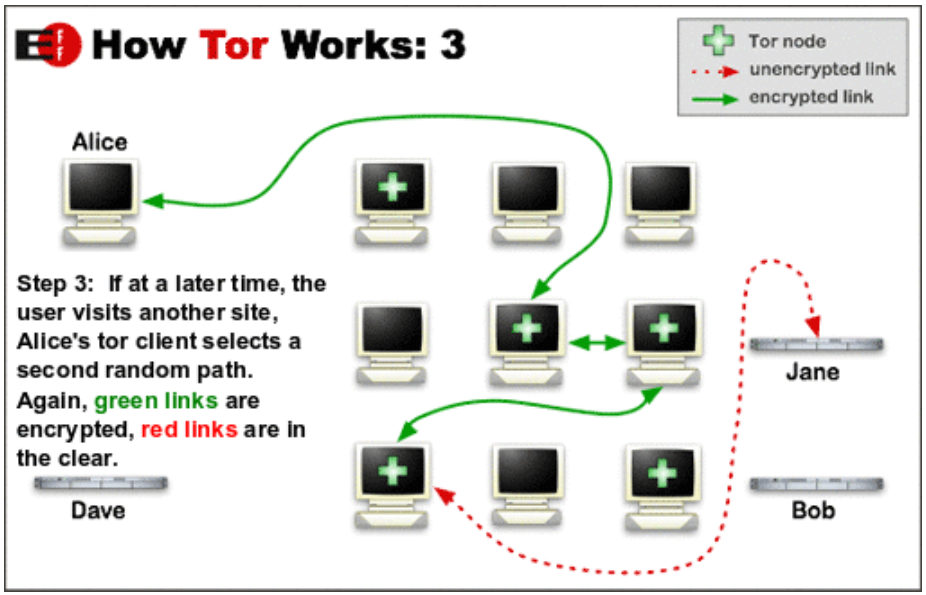
MULTI-LAYERED ENCRYPTION

Your traffic is relayed and encrypted three times as it passes over the Tor network. The network is comprised of thousands of volunteer-run servers known as Tor relays.

BROWSE FREELY

With Tor Browser, you are free to access sites your home network may have blocked.


How Tor Works: 2
Tor node
unencrypted link
encrypted link
Alice
Step 2: Alice's Tor client picks a random path to destination server. Green links are encrypted, red links are in the clear.
Jane
Dave
Bob


How Tor Works: 3
Tor node
unencrypted link
encrypted link
Alice
Step 3: If at a later time, the user visits another site, Alice's tor client selects a second random path. Again, green links are encrypted, red links are in the clear.
Jane
Dave
Bob

NordVPN
ExpressVPN
PIA
privateinternetaccess
TorGuard
ProtonVPN
VPNs
AirVPN
Oeck
Perfect Privacy
We encrypt and anonymize your internet
HIDE me
TRUST.ZONE
OVPN
windscribe
MULLVAD VPN
IVPN
atlasVPN
Ivacy VPN
Speedify
CyberGhost
FASTESTVPN
AZIREVPN
when privacy matters
Guardian

2. Privacy monitors

Ad blockers

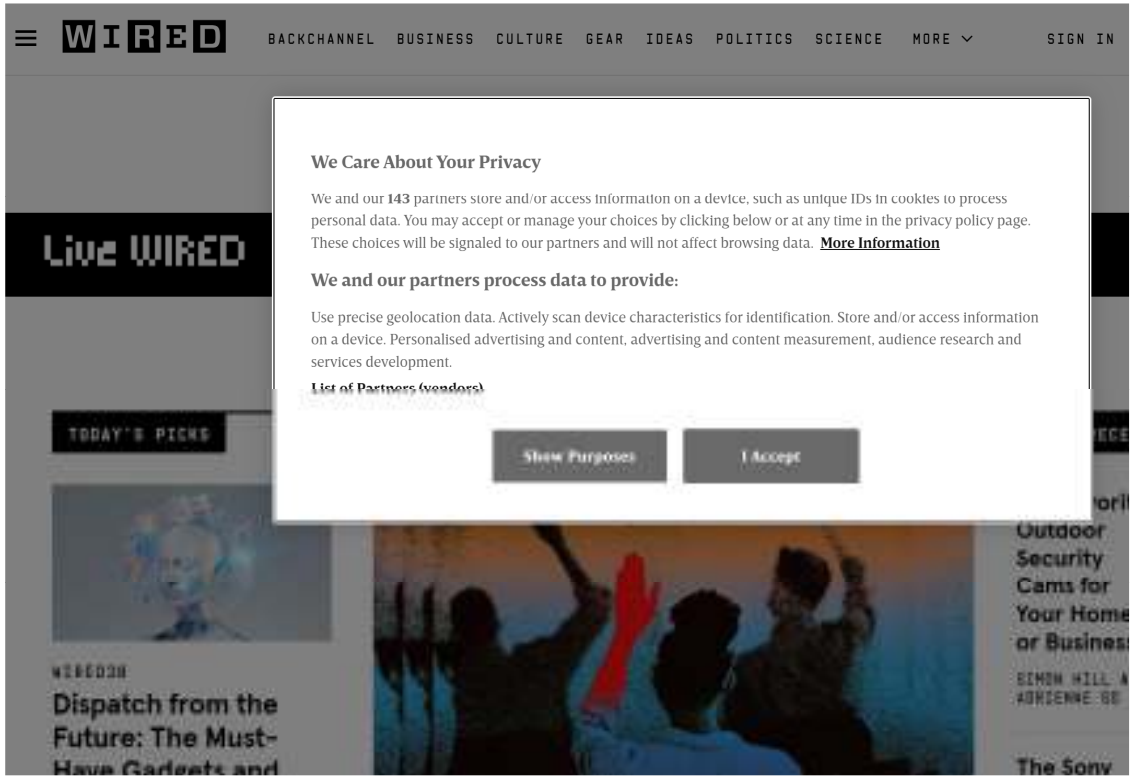
Tracker blockers

Feed monitors

App leak monitors

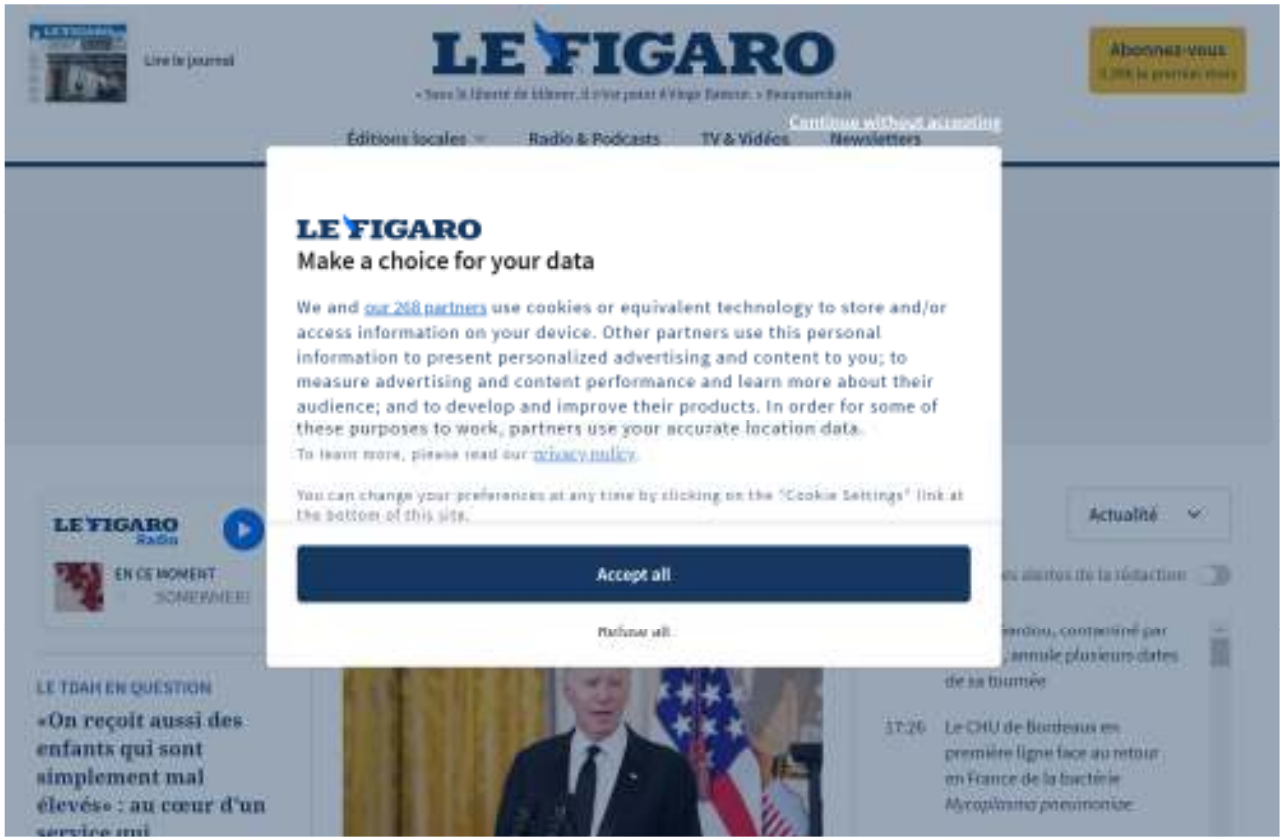
The eternal cookie war

- We can give in to cookie demands, or we can work through extra clicks to minimize personal data flows
- There is still an asymmetry of effort between accepting and declining cookies



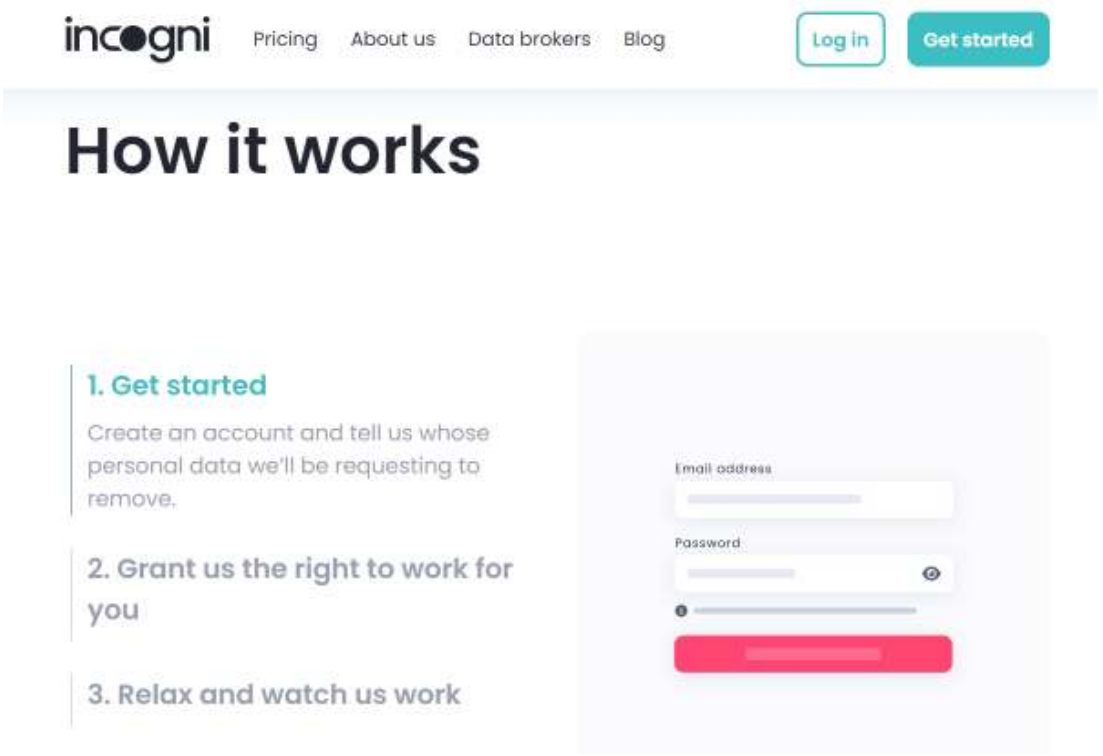
Cookies: “Refuse all”

- In the EU, the GDPR has led to the gradual appearance of “Refuse all” buttons



Delete your personal info from Data Brokers

- Companies that use the legal framework to demand the erasure of our personal data
- How many brokers?
- Do they prevent Google search results?
- What price tiers?
- How focused is the query?
- Examples
  - DeleteMe
  - Incogni
  - Optery
  - PrivacyBee
- Reviews 2023

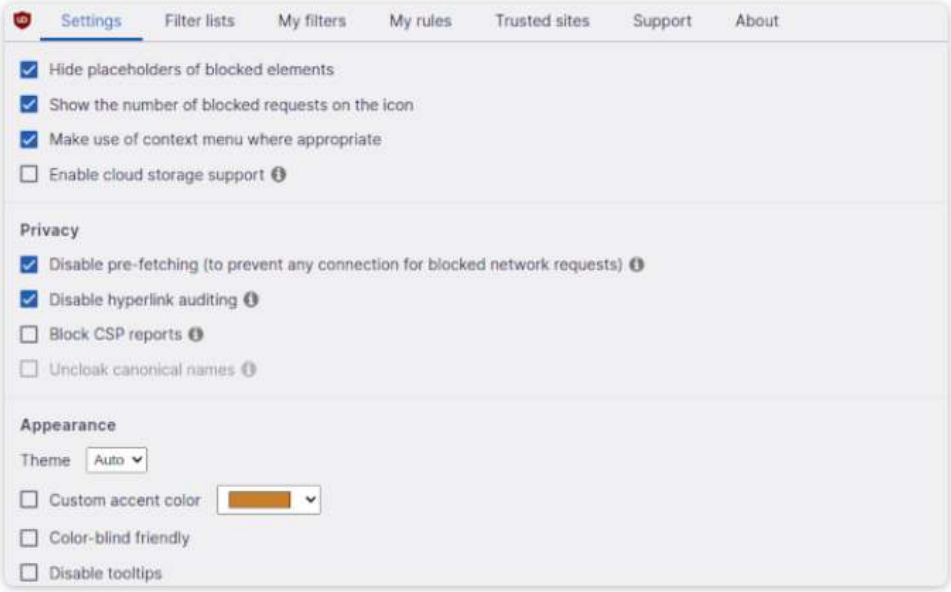


uBlock Origin

Featured 4.7★ (27.5K ratings)

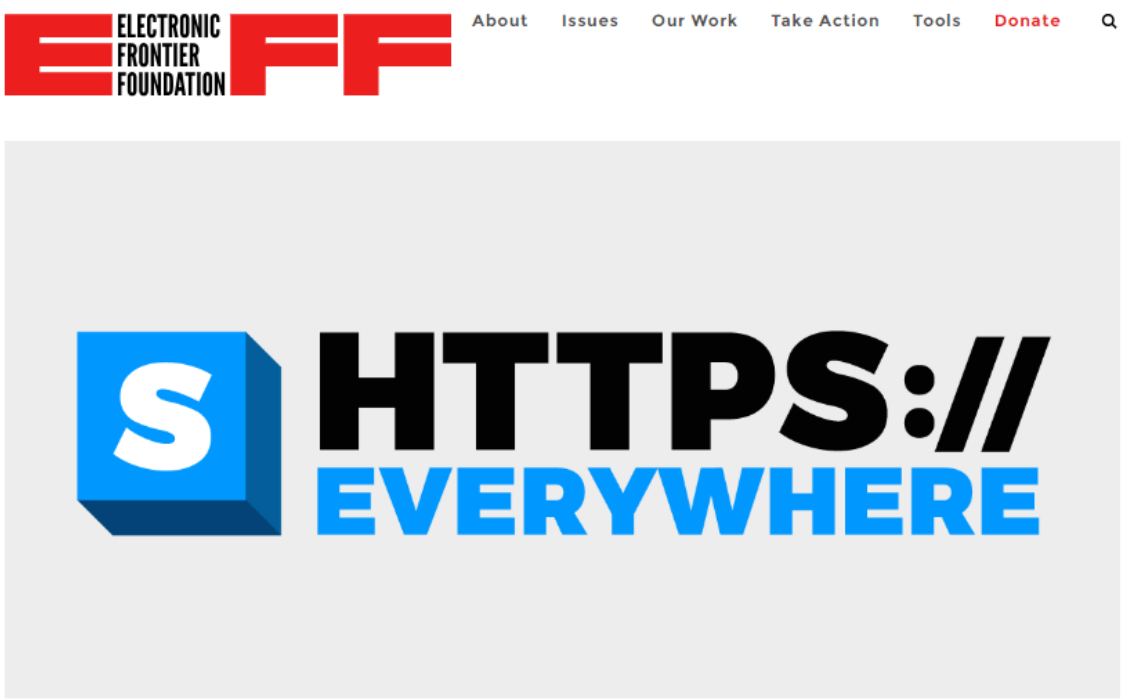
Extension | Privacy & Security | 34,000,000 users

Ad blockers



Tracker blockers

Site-securing extensions



Source

3. App settings

- Privacy configurations
  - App access
  - Face recognition
- Ad preferences: self-profiling
- Requesting and inspecting one's data

Explore guides

Safety

Protecting yourself and your information

Get Started

Generative AI

Generative AI at Meta

Get Started

Use

Learn how we use your information

Get Started

Teens

Teen privacy explained

Get Started

Security

Keeping your information secure protects your privacy

Get Started

Sharing

Control who can see what you share on Meta

Get Started

Collection

What we collect, and what you can do

Get Started

Access

Download your information at any time

Get Started

Location

Learn about your location privacy

Get Started

Ads

You have options to manage the ads you see on Facebook

Get Started

Activity

Everything you need to know about your activity

Get Started

Meta

Privacy Centre

Airbnb

Remove

Logged in with Facebook
Added on 24 Feb 2015 • Active

Friends | Remove

Info you're sharing with Airbnb

Name and profile picture This is part of your public profile and can be accessed at any time.	Required
Email address [redacted]	Remove
Date of birth Your birthday	Remove
Page likes Your likes	Remove
Current town/city Your location	Remove
Friends list The names of your friends who also use and have shared their friends lists with Airbnb	Remove
Home town [redacted], Romania	Remove

Greatest Movie Quiz
Added on 25 Jul 2014 • **Active**

View and edit | Remove

Academia.edu
Added on 31 Aug 2019 • **Expired**

View and edit | Remove

Pinterest
Added on 7 Jan 2014 • **Expired**

View and edit | Remove

Alibaba.com
Added on 19 May 2021 • **Expired**

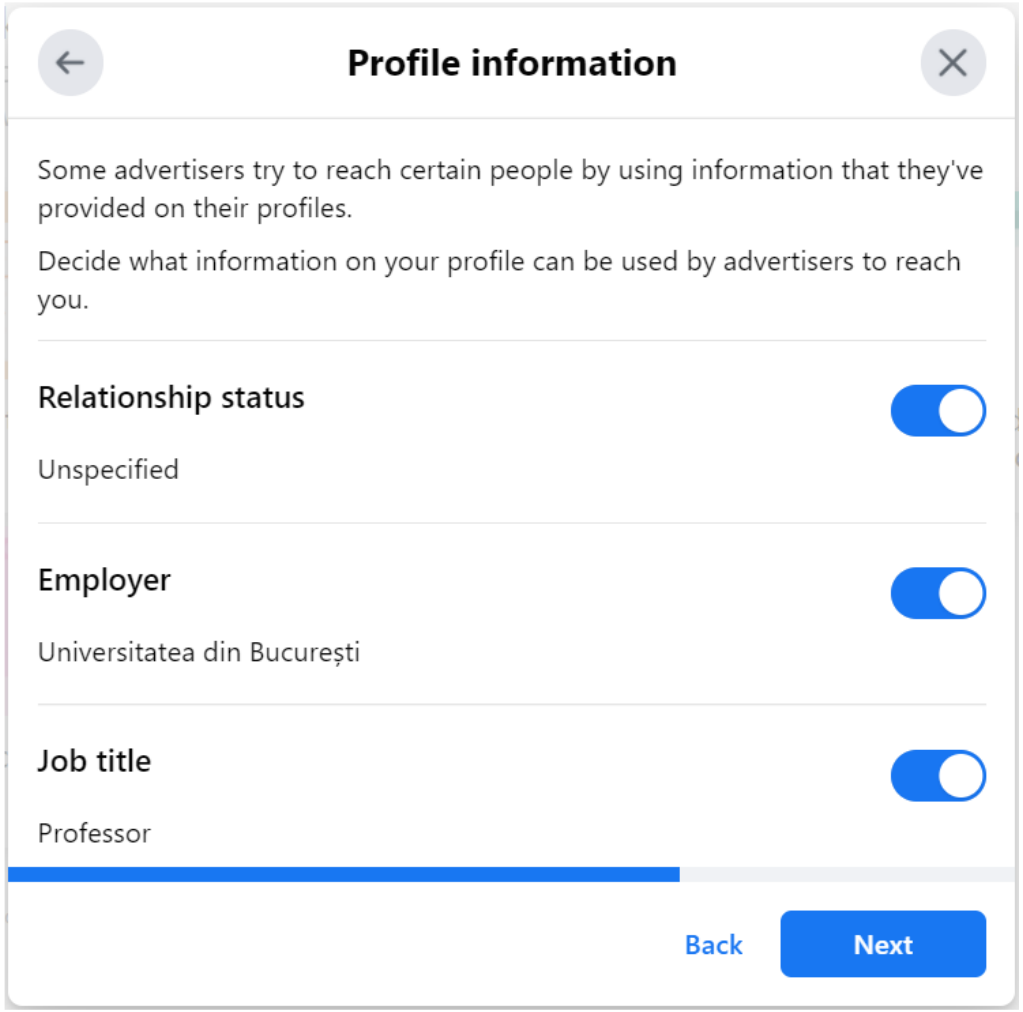
View and edit | Remove

Wix
Added on 10 Jun 2015 • **Expired**

View and edit | Remove

Rapyd Community Login
Added on 26 Jul 2022 • **Expired**

View and edit | Remove



Ad settings

Information used to show you ads

Basic demographic information
Your age, gender and location

Information not used to show you ads

To update each setting for this information, you can change your ad experience.

- **Ad activity on Meta**
  Ways that you engage with ads, such as clicking on or liking ads
- **Ad topics**
  What you prefer your ads to be about
- **Activity information from ad partners**
  For example, your purchases from shopping online and in your favourite shops
- **Categories used to reach you**
  Other categories that advertisers use to reach you, such as your employer or job title
- **Audience-based advertising**
  Advertisers using your activity or information

Curate others' extended selves

Join forces / Keep in touch

EFF

ELECTRONIC FRONTIER FOUNDATION

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The leading nonprofit defending digital privacy, free speech, and innovation.

FEATURED UPDATE

To Best Serve Students, Schools Shouldn't Try to Block Generative AI, or Use Faulty AI Detection Tools

Generative AI gained widespread attention earlier this year, but one group has had to reckon with it more quickly than most: educators. Teachers and school administrators have struggled with two big questions: should the use of generative AI be banned? And should a school implement new tools to detect when students have used generative AI? EFF believes the answer to both of these questions is no.

FEATURED UPDATE

Low Budget Should Not Mean High Risk: Kids' Tablet Came Preloaded with Sketchyware

PRESS RELEASE
ELECTRONIC FRONTIER FOUNDATION

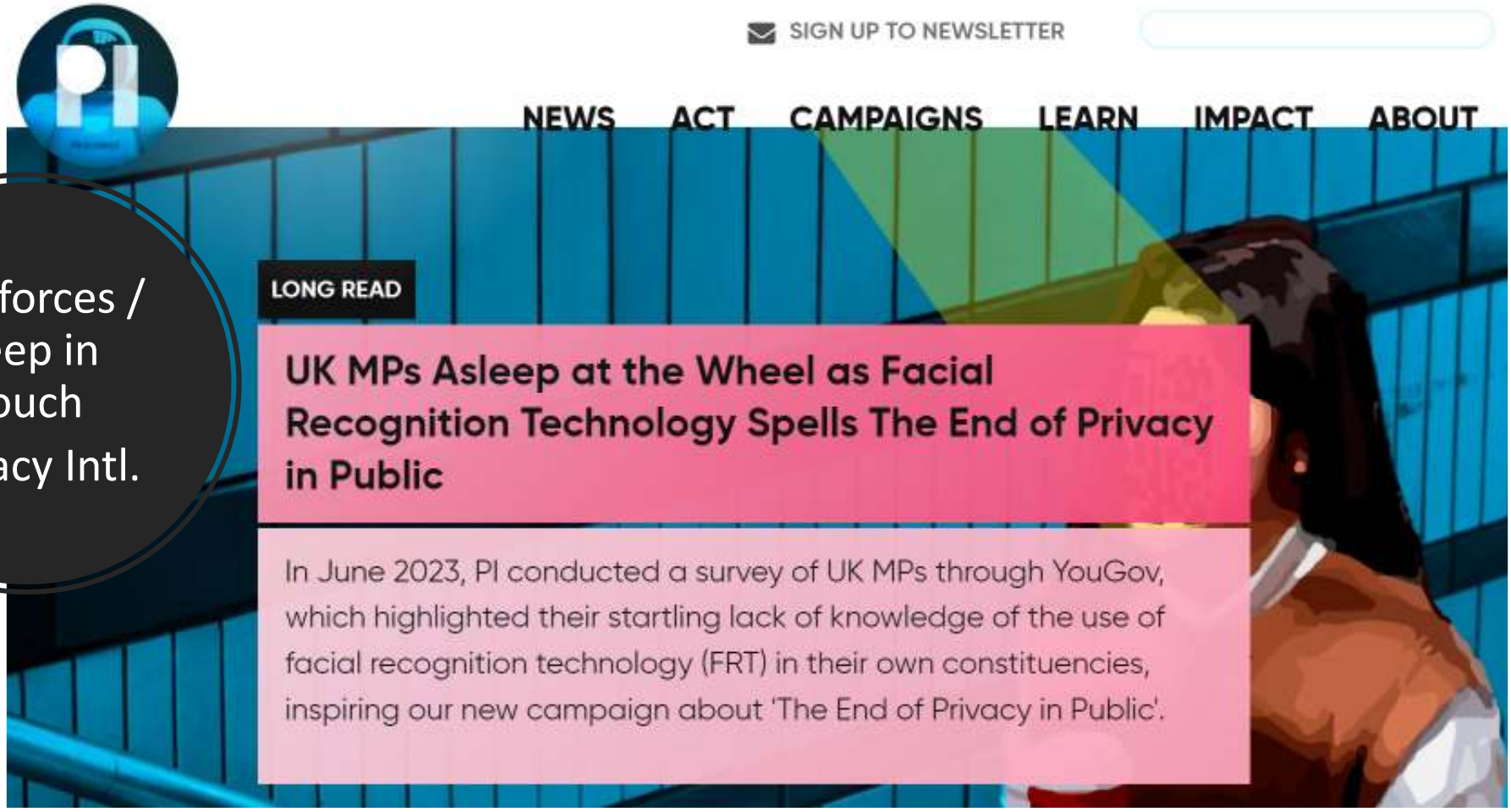
FEATURED UPDATE

EFF to Supreme Court: Fifth Amendment Protects People from Being Forced to Enter or Hand Over Cell Phone Passcodes to the Police

[Source]

Join forces / Keep in touch

Privacy Intl.



Source

Take away

1. Corporations are ethical actors
   - Stakeholders vs. shareholders
   - Corporate social responsibility vs. ethical corporate action
2. The expert role
   - Exit, voice, loyalty
   - Ethical corporate activity vs. whistleblowing
3. The user & citizen role
   - Limiting data flows: filtering, obfuscation
   - Digital profile curation
   - Monetizing one's own data
   - Curating for self and others
   - Collective action